



Merry Christmas

GRAIN

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THE SEASON'S BEST WISHES!

☆ Christmas 1942 is a working Christmas, a fighting Christmas, a sober Christmas. Yet because we will all do our best to make it so, it will also be a Merry Christmas. To each and all of its many friends in the grain and milling trades, Hart-Carter extends its greetings and best wishes and with them a pledge of continued service and cooperation in the months ahead.

HART-CARTER COMPANY

Minneapolis

Minnesota



Noel Joyeux, Genoegelyke Kersted, And Mait Nodlag Agat

CHRISTMAS would mean nothing if it were not shared with someone. It is a festival which cannot be indulged in alone. The gaudy red ribbon about the simplest gift causes that gift to take on a merit which it did not possess before; and just as a single rose may light up a room, or a bit of lavender may perfume a queen's whole wardrobe, so one word on a card, written in sincerity, may brighten the dimmest winter day.

That is why Christmas messages are sent and will continue to be sent until the star's are gone and the sun is no more. "The Compliments of the Season" is not an empty phrase. It is founded upon a human need in every one of us. It is an essence which makes the wine of life sweeter; it is the constant drop of rain which finally softens the hardest stone.

Humanity realizes this, whether consciously or not; and this is why Christmas will go on being celebrated, no matter what the cynics may say.

It is an eternal festival. It cannot perish, it cannot be destroyed.

But the Spirit Is Anxious

WE BEMOAN our handicaps; we wish we had the wherewithal to do what we would like to do for everybody we know:—pass out jewels and sweet essence to all the lovely ladies, stock cellars for the genial gentlemen, a library of books to the booky, a playroom of toys to the children, and to those who would be clever—a witty greeting that would "floor 'em."

But try as we will, there's no bettering "Merry Christmas" as far as our imagination goes,—and that isn't so far in view of actual results. So it simmers down to the realization that about all we can do for you is sincerely wish you a "Merry Christmas",—but one that incorporates a **WORLD** of honest feelings in it. In fact, our good intentions on this score went so far as to dash over to the library to find ways of saying it in other tongues.

Thus it is with great pride we wish you, as well, Felices Pascuas (Spanish), Baas Festa (Portuguese), Noel Joyeux (French), Genoegelyke Kersted (Dutch), God Jul (Swedish), Glaedelig (Norwegian), Szecealivy Swieto (Polish), Mait Nodlag Agat (Irish), Boldog Keracsony (Hungarian), Meli Kalikama (Hawaiian), Buon Natale (Italian), and, in that soon to be forgotten tongue—Frohlische Weinachten (German).

Greetings from Churchill

I would like to take this opportunity of wishing you and your staff a Merry Christmas and a Happy New Year; also that you will be able during the ensuing year to maintain the present high standard of "GRAIN."—C. A. McCallum, Elevator Superintendent, National Harbours Board, Churchill, Man. (Churchill is on Hudson's Bay, —the northernmost terminal in the world.)

MEET IN SYDNEY

A note from Mr. L. S. Harrison, Wheat Commissioner & Manager of Government Grain Elevators, New South Wales Department of Agriculture, Sydney, Australia, indicates that he and John Auld will (or probably have by this time) hold a reunion in Sydney.

Mr. Harrison visited this continent a few years ago, contacting the industry from coast to coast on his world circle trip for elevator construction and grain handling ideas. He addressed the Chicago Chapter of Superintendents, among other groups.

John Auld is the son of James Auld of Hales & Hunter Company, Minneapolis. The latter was formerly located in Chicago for the same company and met Mr. Harrison at that time. 'Tis a small world after all.



G'wan up to the toy department, Dad. I'll pick you up when I'm ready to go home. Courtesy "This Week."

HEAVY SCRAP NEEDED

While the recent salvage drive was a tremendous success, most of the iron and steel scrap collected was of the light household variety. The need now is for heavy scrap to mix with the enormous supply of light scrap now on hand. Industry supplies most of the heavy scrap, but not enough. In face of needed supplies of heavy scrap, every effort **MUST** be expended to more than fulfil the amount required. Do your share today!

MOTOR RESTRICTIONS

The purchaser of an electric motor must show that the horse power he is applying for is no greater than that required to do the job, according to a provision in GCO L-221, effective Dec. 10. It has been the practice of industry for many years to "over-motor", that is, to apply greater motor capacity than necessary for the job to be done. As a means of stopping this practice, the order applies certain measurements by which the actual power requirements may be related to the horse power of the motor applied for by the purchaser.



PRAISES WORK

We, and several others to whom we have talked, feel that the SOGES Safety Manual fills perfectly a long felt need for our industry. We are so sold on it that we think it would be an excellent idea to furnish a manual to every man on our payroll. Send us 120 copies.

The accidents in our respective plants are not of any special interest, other than that they reflect the necessity of a more intensive safety campaign.—Paul H. Christensen, General Superintendent, Van Dusen-Harrington Co., Minneapolis.

STARK, JESSON ELECTED

John Stark, President of the Mid-Continent Grain Co., was elected head of the Kansas City Board of Trade for 1943. Formerly First Vice President, Mr. Stark succeeds Gunnard Johnson of Wolcott & Lincoln, Inc.

E. E. Klecan, of Klecan Grain Co., moves up a notch, and his position of Second Vice President will be filled by E. R. Jesson, Uhlmann Grain Co.

CONVENTION HELPS WAR

Will an SOGES convention help win the war? That is the only question our association's officials need to answer today when discussing whether or not to go ahead with our plans. That is the only question Joseph B. Eastman, Director of ODT asks. Non-essential conventions, of course, **MUST** be curtailed.

The SOGES convention, however, is a vital cog in the machine we are building to squash the Axis. Wars are not won by soldiers alone. There must be the best tools of war—production. There must be a solid economic foundation—good business. There must be protection of health and welfare on the home front.

With the SOGES membership engaged in handling and processing grain for direct and secondary food uses, with the war time problems confronting elevators, feed plants, soybean processing units, and so on, we, above all groups, most assuredly **MUST** get together to discuss problems directly vital to victory.

Chicago is the convention-city selected. March 25-26-27th are the dates. Make your plans now to attend. Send in your questions. Contribute your program ideas. Offer your thoughts for a talk, for discussions. We'll need everyone's 100% co-operation and participation. Plan today to contribute your best for **VICTORY!**—Gilbert P. Lane, President, SOGES, Plant Manager, Arcady Farms Milling Co., Chicago.

FUTURE OF SYSTEM

In my opinion, the future of our marketing system depends upon the success of Senator Reed and his group, for if wheat prices are not permitted to advance to parity and thereby permit a flow of wheat through the normal channels, I can see no other alternative but complete control of our grain marketing by the Government through the CCC.

In fact, if the cash market is separated from the futures market then both of them will die and result in a giant monopoly—which at the present time happens to be one operated by the Government's CCC—which is almost daily making inroads into the private grain trade.—Orrin S. Dowse, Shellabarger Mill & Elevator Co., Salina, Kan.

McKINLEY NAMED PRESIDENT

Arthur McKinley, Manager of the Omaha Elevator Co., and a speaker before the SOGES convention last Spring, was elected President of the Omaha Grain Exchange recently. He succeeds Robert Scoular, Manager of Scoular-Bishop Grain Co., another SOGES speaker.

G. F. Dristy, Updike Grain Corp., and D. O. Aller, Butler-Welsh Grain Co., were elected Vice Presidents.

WORKER'S CIGARET DOES IT

Tossing a cigaret into a pile of paper packing cases when he thought he was about to be discovered breaking the company's "no-smoking" rule, resulted in a \$100,000 fire that destroyed the reinforced concrete warehouse connected with a cereal plant. Six firemen were injured in the inferno which lasted 10 hours before being brought under control. The employee was 18 years old.

SAFETY MANUALS AVAILABLE

The reception given the SOGES Safety Manual far exceeded that expected. While a copy was sent with the compliments of the Superintendents' Society to every one on their mailing list, yet many are ordering a manual for each employee. Prices are scaled down from 25c each for 1 to 10 copies, 23c each for 11 to 20 copies, 20c each for 21 to 50 copies, and 18c each above that. Limited supplies suggest your ordering your requirements today.

**If You Think You're Pinched
and Can't Afford 10 per cent for
U. S. War Bonds—**

These prices are taken from a letter smuggled out of Belgium at the end of August, 1942, to the Belgium Information Center, New York City.

Eggs	\$4.00 per dozen
Butter	\$4.00 per pound
Coffee	\$13.00 per pound
Onions60c per pound
Flour	\$1.50 per pound
Soft coal....	\$60.00 per ton on the Black Market.

SAVE GRAIN DOORS

Our attention has been called to the fact that many shippers are using too many and too large nails in setting up grain doors for bulk grain. The standard and recommended size of nail to use for this purpose is a No. 16.

Also, it is shown that one nail for each end of the door is sufficient, whereas some shippers are using as many as five nails.

It is extremely difficult for carriers to replace grain doors at the present time, and we urge our readers to assist in conserving the supplies of this necessary equipment by a judicious use of those they have on hand.

OUTLOOK FOR GRAINS GOOD

The appalling government findings on malnutrition will doubtless result in publicizing diets containing a considerably greater percentage of cereal grains after the war than heretofore. Such would keep up the present peak activity indefinitely.

Static Electricity and Grounding Elevator Legs

H. B. Willeford, Marsh & McLennan, Inc., Minneapolis

WHEN we think of static electricity the thought arises in our minds—can static electricity set fire to combustible materials or cause explosion?

The usual static we get from walking across the rug in the room or the small discharge from a belt, probably would not. But, if you have a large metallic object insulated from the ground and continually discharge static from a belt to this object, the charge will gradually build up to the point where you can get a very hot spark when contact is made with a ground. It has been proven if this occurs in the presence of combustible dust or explosive gases properly mixed with air, an explosion will result.

In order to get the entire picture of the importance of removing static from elevator belts, it is necessary to discuss Static Electricity in general and its relation to dust explosion and ignition.

During recent years, static electricity has been recognized as the cause of many serious fires and explosions, and resultant loss of life. Numerous studies have been made of various phases of the problem, the reports of which have appeared in pamphlets and articles in various publications. Up to the present time, this entire subject has not been covered in a comprehensive way.

Consequently the National Fire Protection Association has been collecting data on this subject for the past several years. We understand their committee report was adopted at the May meeting. This informative report is written in narrative form, which is clear, concise, and readily understandable by the layman. It has been the endeavor of the committee in preparing this report to avoid the use of technical language and to include numerous illustrations to make it of greatest service to plant managers, superintendents, and others charged with the safe operation of industrial processes. This pamphlet is now available for distribution. Most of the information I have on the subject is taken from an advance copy of this report.

Generation Not the Hazard

THE generation of static is not in itself a hazard. The hazard appears when static accumulates to the extent that a spark discharge may oc-

cur. Therefore, eliminating the static hazard calls for preventing its accumulation rather than its generation.

Humidification is probably the most effective means of preventing accumulations of static electricity, but in some cases this may not be feasible. Therefore, more dependence is generally placed on grounding.

Experiments have proven that static is generated not only by friction, but also by the bringing together and separating unlike substances. For example: If a sheet of glass is coated with varnish and allowed to dry, the act of pulling the dried varnish from the glass will result in both substances being charged with static.

Probably nowhere in industry is the presence of static more pronounced than in connection with belts and pulleys, and nowhere are more difficult problems presented in its removal.

Static electricity charges are generated on power transmission belts as follows:

- (1) Friction of the belt on the pulley.
- (2) Separation of the belt from the pulley.
- (2) The flexing of the belt.
- (4) To a less extent by the friction of the atmosphere on the belt. On conveyor belts, additional charges are generated by the friction of the conveyed material on the belt.



If the metal machinery is grounded, a charge will remain only on the belt. If the machine is insulated from the ground, its potential will gradually build up to possibly dangerous proportions, depending upon such factors as the electrical capacity of the machine and the atmospheric conditions surrounding it. In some cases sparks six-inches long are often discharged. Such

spark discharges in the presence of flammable materials are acute hazards.

How to Get Rid of It

A VERY effective way of preventing the accumulation of static on short belts and pulleys is to apply at frequent intervals approved static eliminators, or a material which will make the surface of the belt a conductor of electricity so the static will be led away through the grounded pulley.

In such cases where oil film on bearings would produce enough electrical resistance to prevent proper grounding, ground brushes or wipers should be attached to line shaft, as well.

V-belts are less liable to produce static than flat belts, but should be similarly protected.

Individually-driven units eliminate the belt and pulley hazard. Chain drives used instead of belt drives will eliminate the static hazard and are advised where possible.

Where belt drives must be used, the static hazard can be lessened by decreasing the speed of the belt and increasing the size of the pulley.

Elevator legs present some of the most difficult problems of grounding found in a grain handling plant, and probably involve some of the greatest static hazards. Grain discharged into the boot may be highly charged from friction on belt conveyors, or in spouting, and this charge may be accumulated on the metal buckets as the grain is scooped up. The buckets are insulated by the cup belt and may carry their charges all the way up to the head pulley. If the head pulley is lagged, the charge on the buckets may be increased by belt friction, and carried down the back leg until the buckets come within flashing distance of the metal boot pulley. Anywhere in the course of the travel of the buckets in the legs, there is a possibility of sufficient belt slap to bring the buckets within flashing distance of the leg casing. The normally dusty atmosphere inside of the leg makes the occurrence of such sparks or flashes extremely dangerous, and it is probable that a surprising number of the frequent leg explosions have their origin in static sparks.

Static Brushes Effective

IT IS generally desirable to connect all metallic parts with heavy copper wire and ground the system with one common ground wire. All-metal legs in concrete houses should be grounded. All shafting, spouting, or other metallic material in the vicinity of the legs should be bonded to the leg.

In metal elevator legs, head, boot, leg casings, head and boot pulleys and elevator cups should be grounded. All except the head pulley and the buckets may be grounded by attaching the ground wire to any portion of the exposed metal. Head pulleys may not have direct metallic contact with the metal head so the head shaft should, therefore, be separately grounded.

In wooden legs, it is important that the head and boot pulleys and the buckets be grounded, and where metal heads or boots are used in connection with wooden (or concrete) legs, such metal parts should be grounded also.

The problem of grounding the buckets inside the leg is the most difficult to solve. In some cases, boots

are fed from the back or at a point near the bottom of the front side in such a manner that the buckets are entirely clear of the grain before the contact between the bucket bolts and the metal boot pulley is broken. In such cases, it is probable that any static accumulation on the buckets will be drained to the boot pulley.

Where buckets do not emerge from the grain before contact between bucket bolts and boot pulley is broken, there is danger of static on the buckets, and the problem is one of grounding the bucket continuously until they have emerged from the grain. In this case, there is a possibility of aggravating the hazard by the attempt to eliminate it.

As an illustration, a metallic roller or brush arranged to make contact with the buckets after they have left the face of the boot pulley might cause a static spark or flash at the approach of each bucket and such sparks at a point where dust is normally in suspension is highly dangerous. Any arrangement for grounding the buckets must make contact with the buckets before they leave the face of the boot pulley, and must maintain continuous contact until the buckets are entirely clear of the grain. A similar arrangement is also necessary at the head pulley.

This Unanimously Voted Down

IT HAS been suggested that the hazard of static accumulation on elevator buckets can be eliminated by bonding all of the buckets together, and making certain that the boot pulley is grounded. Light flexible woven copper ribbon may be used for bonding, and may be installed simply by loosening the bucket bolts, stretching the ribbon along the belt under each bucket, and then tightening the bucket bolts again. Care should be taken to make sure that all of the buckets make contact with the ribbon, and that the ribbon is continuous throughout the length of the belt. Continuous grounding of all the buckets is thus maintained through contact between successive bucket bolts and the boot pulley.

Grounding of machinery and equipment to prevent the accumulations of static electricity, involves the same general fundamental principles as those underlying the requirements of the "National Electrical Code" for grounding of electrical circuits and equipment.

Grounds of relatively high resistance may be adequate to prevent accumulation of static charges, but consideration of mechanical strength and reliability of grounds dictate the use of substantial grounding conductors with relatively low resistance; namely, providing a large cross sectional area, short and direct path of low resistance to ground.

Static grounds should not be made to electrical conduit systems, gas or

steam pipes, dry-pipe sprinkler systems, or lightning rods. Grounding systems must be tested for electrical resistance when completed, and regularly and frequently thereafter to make sure that their original effectiveness is not impaired by such factors as corrosion, mechanical injury and loose connections.

The ground wire, or grounding conductor is probably the most important part of a grounding system for removal of static. The No. 4 B&S Gauge Wire recommended for grounding is selected for its mechanical strength rather than for its current carrying capacity. Either bare or insulated wire may be used.

Where the ground wires extend through operating areas, they should be protected against mechanical injury by standard conduits, or by placing behind rugged parts of machinery. Nothing smaller than 3/4-inch conduit is recommended for the No. 4 wire, in accordance with the requirements of the National Electrical Code. Due to the choke effect in case of secondary lightning discharges, an electrical connection should be made between the wire and the conduit at point where the wire enters and leaves the conduit. Where ground wires extend into the ground, they should be protected to a point below the ground surface with 3/4-inch conduit. In order to secure the shortest possible path to ground, it is generally advisable to extend ground wires in a downward direction.

MY IDEA ON DUST EXPLOSIONS

Henry Cox, Chicago, Retired

I HAVE taken a great deal of interest in dust explosions ever since the Superintendents' Society was founded. My whole thought since the C&NW explosion has been on the possible cause of these holocausts. My first reaction was, as I stated before one of the conventions, that "bug juice" had some chemical effect on the dust that is always in wheat that caused it to be explosive.

As you are fully aware, we had no explosions in the old wooden elevators. These blow-ups occurred



REDUCE HAZARD of FIRE and EXPLOSION

CONTROL STATIC WITH WESTERN STATIC ELIMINATOR

The scientifically developed
Brush that Collects and
Eliminates Static

A proven safety device for use wherever Conveyor Belts or other Belts are constantly building Electrical Static through friction . . . in plants where there is danger of Fire and Explosion due to static sparks igniting dust in the air.

Thousands of fine wire bristles interwoven between heavy copper wires collect generated static, and conduct it to a convenient ground. Static is broken down into such small units that at no time is a flasher spark visible.

INEXPENSIVE . . . and easy to attach. No installation cost. So durable, they last indefinitely, and do not impair or interfere with the operation of the belt.

Our Engineers will be glad to advise you. Write for illustrated folder, performance data and price.

WESTERN BRUSH COMPANY
35 S. Market Street Chicago





*Pre*VENT Destructive DUST EXPLOSIONS WITH ROBERTSON SAFETY VENTILATORS

Mounted on your elevator legs, Robertson Safety Ventilators continuously vent dangerous fine dust through ceaseless gravity action . . . thus PREventing conditions that cause violent and destructive explosions.

Should a primary explosion develop (of which there is less possibility where Robertson Safety Ventilators are installed) . . . it is immediately vented outside . . . expansion of gases is dissipated and disastrous secondary explosions are eliminated.

Remember the old saying . . . about an "ounce of PREvention being worth a pound of cure" . . . and play safe with Robertson Safety Ventilators.

H. H. ROBERTSON CO.

Farmers Bank Bldg.

Pittsburgh, Pa.

mostly in concrete and steel houses that all have been equipped with electric power.

It occurred to me the last few years that I was in charge of a steel and concrete elevator that these explosions could come from static. I had considerable experience with static that I saw with my own eyes. It was exceptionally visible at times in the dark basement of the workhouse where there were five 25 h.p. motors installed and where there was very little outside air accessible. This static, on the other hand, was, I believe, eliminated when the motors were moved from the workhouse basement to practically the ground floor of the annex where there was plenty of light and good fresh air at all times. Thereafter no static was ever visible, although the daylight may have deceived us because of being brighter than the static.

I think all motors that are in steel and concrete elevators should be grounded direct to Mother Earth with a weatherproof cable unattached to any part of the steel or concrete in the building. It likewise looks to me as though this new static eliminator recently put on the market for our industry would be a mighty profitable investment for all our belts—as a means to further eliminating this unknown quantity—S-T-A-T-I-C.

SOGES SAFETY MANUAL OUT

Attractively covered, the Superintendents' Society Safety Manual went into the mails earlier this month. Containing 48 pages in all, the authoritative text is well illustrated, prepared and presented with the co-operation of the Terminal Elevator Grain Merchants Association and a number of advertisers. This handy pocket-size booklet is a particular tribute to the active Omaha and Council Bluffs Superintendents who lined up considerable advertising therein in the belief and hope that same would be forthcoming at convention time. Harry Clark and Harold Roth, in particular, were active herein.

Rising printing and paper costs, however, prevented publication until Paul Christensen of Minneapolis kindly interested the Terminal Elevator Grain Merchants Association in this activity through his superior, Mr. J. A. Mull. For the past three months printing and labor difficulties had delayed its completion. But now it's here and every one should be happy about the whole thing.

The association hopes Superintendents will purchase additional copies for their crews so that the greatest good can be done for the greatest number. Attractive bulk prices are offered, the proceeds to help offset handling and mailing charges and accrue to the pained monetary situation most associations find themselves in about this time every year.

THE OLD TIMER SPOUTS

Do you remember away back when: Country elevators had flat bottom bins...one leg with six-inch buckets, called cups...a high driveway to the dump would hold a wagon load?... The horses would balk on the incline... the driver would miss the dump logs...the horses would pull up as you dumped the load?

You had one horse-power—Old Dobbin...she would go blind from going around...she would stop and...choke the leg?...There was no loading spouts...we loaded cars with hand shovels...we had thirty cap cars...a sixty cap was a big car...an eighty cap was an elevator on wheels...a hundred cap was unthought of?

The first loading spouts were square and we thought grain would whirl in a round spout...a flexible was a round spout?...We moved a car with a pinch bar...it took an hour to get a load away and an empty under the spout...we had patent grain doors attached to each car...A sign read: "Do not drive nails in door posts?"...We felt a handful of grain to grade it?...The one lung gas engine came out...they were—oh so dangerous...a man who could run one was a genius?...The leg was driven by a chain drive...the rope drive first came out...you looked for an old sailor to splice it...he got ropes crossed in reeving?

We carried lanterns all over the house...dust explosions were unheard of?...The farmer watched as you weighed his load—or does he still do that?...The Terminal Elevator

Superintendent was a grain inspector (and isn't he now?)...we had no supervisors of weights?...We had screw conveyors—no belts...we thought grain would roll off a belt?... A rope and niger head was a real car puller?...It took an hour to load a car...48,000 lbs. of oats was a car load?

It took days to load a vessel?... Weevil were unknown—oh my?...We shipped grain "as is"?...A switch engine would "stand-by"?...There were no phones to bother you?...We rushed the can at 9, 12, and 3?...An eight-hour day came in...we just couldn't do all that work in eight hours?...The bob-tailed coach horse was fed bleached oats?...15c an hour—aw hush?...We left home at 6 a.m. ...we got home at 7 p.m.?...We let the dust pile up...we cleaned house Saturday p.m.?—Oh, but those were the good old days!—A-Non-a-Muss.

READERS WANT MORE F-A-C-T-S

Readers want to know more about business and its part in the war effort, Dr. Henry C. Links of the Psychological Corp. told the Association of National Advertisers in New York this month. A survey completed shows definitely that readers seek inspiration in advertising, as well as the following:

1. A growing confidence on the part of readers in the job that advertising is doing for the war effort.
2. While readers praise, they also criticize, and show distinct discrimination between types of advertising.
3. Readers approve and have praised the scrap and war bond advertising campaigns.
4. Readers believe that the Army and Navy "E" ads contribute to morale in the war effort.
5. Reader's belief that industry is doing a good job to help win the war is even higher now than it was six months earlier.
6. Readers want advertising to tell them about the regular products, but above all how to conserve what they have.
7. Readers want companies to tell about their war efforts—without too much boasting.
8. Readers expect advertisers to give them inspiration, and a vision of the future for which we are fighting.

Start 1943 on the way to Victory. Buy War Bonds with 10 per cent of your pay through the Payroll Savings Plan.

Greetings

from

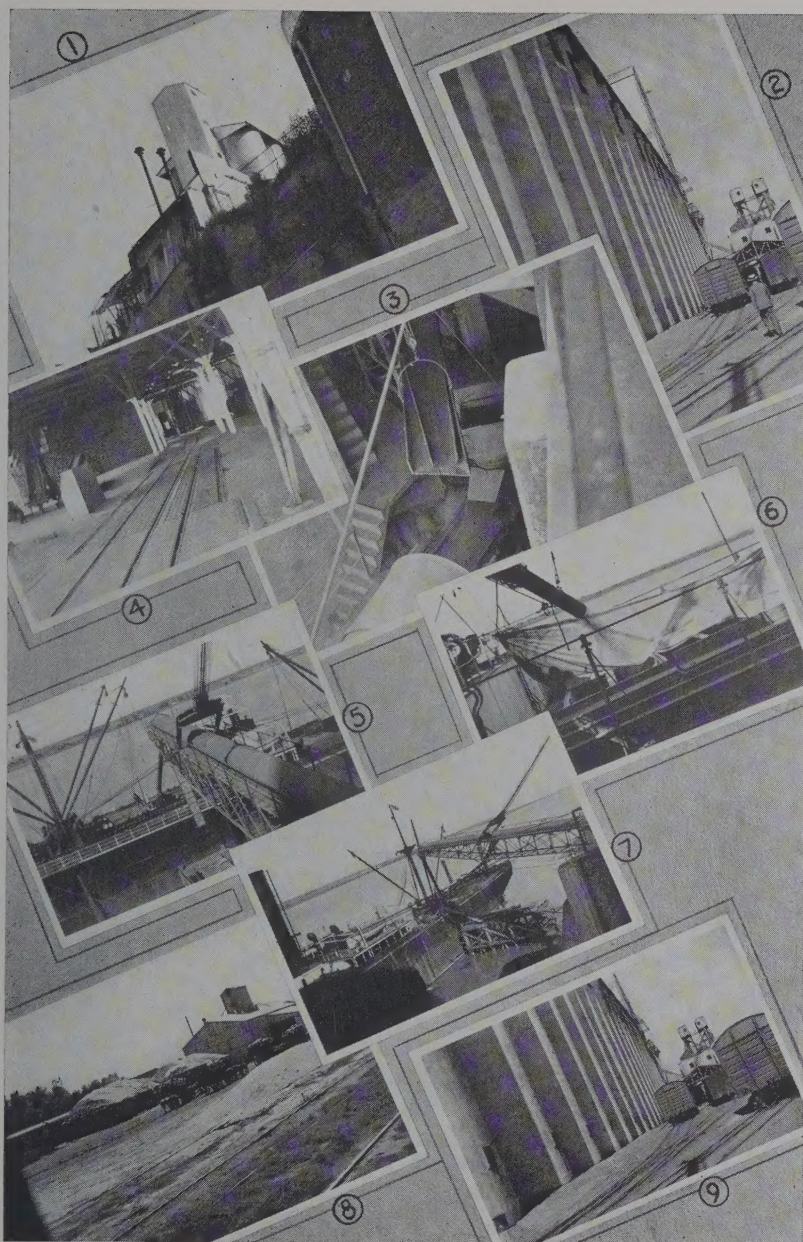
B. F. GUMP CO.

CHICAGO



MANUFACTURERS OF
**MILL and ELEVATOR
MACHINERY**

AND
SUPPLIES



Argentina's Grain Elevators

SNAPPED BY ARTHUR W. BAUM
Former Elevator Employee in Chicago,
Now Author and Associate Editor
of Big Newsstand Weekly

HERE is a binfull of Argentine photos which will be of interest to the readers of GRAIN.

The little ones are Buenos Aires' port scenes. The elevators showing are a string of old wooden houses along Dique 3.

The interior showing sack piles is a sack warehouse at Rosario.

The spout and hatch shot is a British tramp loading corn from a co-op elevator at Rosario.

The rather small house on the cliff with the sort of broken down shed in front is a Rosario house being built on the site of one that blew up. (Yes, they have dust explosions in South America, too.)

The other five are all of Bunge Born's Rosario house—the close-up showing the house end of the conveyor tube with a feed of wheat start-

ing out for the ship in the river.

I would be glad to give your readers my impressions of the trade down there, but unfortunately I didn't spend much time around the elevators and really have nothing that is too worth while.

As you know, the government has an enormous storage program in mind, but I was assured that it would take a long time to work out. Initial construction will be largely on small interior houses, comparing with our country elevators.

Incidentally, I have just added to the pictures a shot of a railroad collection point in the corn country near Pergamino. This sort of gathering place is about all the interior has, aside from a few Bunge and deRidder private elevators. Making the rolling stock of the country grain and flax tight will be an enormous problem as there are now relatively few bulk cars on the assortment of railroads.

Don't let any of your readers ever get into Buenos Aires futures, and surely keep them away from deliveries. There is no delivery point in the contract and the long holder accepting delivery is quite likely to get a dozen or more parcels in widely scattered interior towns, whereupon he must hire someone to round them up and forward them where he wants them—all at his own expense.

Bunge & Born Ltda. handled 3,667,000 tons of 1,000 kilos, or 2,204 lbs., according to the enclosed official government report. Louis Dreyfus & Cia, Ltda., handled 3,020,000; La Plata Cereal Co., 1,833,000, and Luis De Ridder Ltda., 1,802,000. The remaining 33 firms handle lesser amounts.

GOOD WORD GETTING AROUND

AM GLAD to hear that so many think the Omaha convention was so successful, and I certainly concur in their opinions. I have heard many favorable comments, not only from those who attended, but those who have heard and read about the subjects talked over and discussed at the meeting. I feel it was one of the most worthwhile conventions ever held.

Glad the boys in Chicago have the job of following this convention up, as it is going to be a tough assignment.—Paul H. Christensen, Van Dusen-Harrington Company, Minneapolis, SOGES director.



DON'T BE FOOLED

Old man winter stopped Hitler, but don't be fooled into believing that cold weather has stopped the weevil in your grain bin.

The temperature of your grain is not readily influenced by the outside temperature. The temperature of your grain may never become low enough to stop insect activity.

Thus, stored grain insects may carry on their insidious devastation throughout the winter months—

Don't let this happen to your grain—Use

Weevil-Cide
The
DEPENDABLE
GRAIN FUMIGANT

**The 3 to 1 Choice
of the
GRAIN TRADE**

THE ***Weevil-Cide***
THE DEPENDABLE GRAIN FUMIGANT **COMPANY**
**1110 HICKORY STREET
KANSAS CITY, MO.**

Causes of Heat Damage

BY R. O. CROMWELL Before Chicago Elevator Superintendents

THE phenomenon known as respiration is responsible for the heat energy released in a mass of damp grain. Oxidation or respiration in grain, which if prolonged provides conditions favorable to fermentation, is due to the presence of reducing sugars which are unstable because of limited units of oxygen in their structures and the presence of oxidizing enzymes. The reducing sugars have high affinity for and absorb any loosely held or free oxygen. Left over products resulting after oxidation are carbon dioxide and water and oxidation is the first step in decomposition.

Greater oxidation takes place in the gluten of the young germ than in the main body of the seed. Natural germination of a seed begins with oxidation, and germination actually is a breaking down of the kernel outside of the germ and may in a sense be called decomposition in which the young germ or seedling uses some of the resulting products as food. The filling and maturing of a seed in nature is similar in some respects to the reverse of the germination process since in the former more complex substances are built up as they are being laid down in the developing kernel.

Accumulation of Heat

SINCE grain is a poor conductor of heat, it follows that released respiration-heat-energy accumulates in mass in proportion to its bulk and the temperature in time may become considerable. The heat released is also in proportion to the moisture present. The greater the moisture the more rapid its diffusion thru the materials in the kernel and the more rapid the diffusion the more rapid its respiration and production of heat.

At increased temperatures the same heat is produced with less moisture. Moisture diffuses more rapidly thru soft than thru a hard vitreous kernel, and thru gluten more rapidly than thru starch. Therefore, moisture diffuses more rapidly thru shrunken kernels (lower in proportion of starch) as a result of rust, drouth and hot winds than thru plump kernels and therefore heat more easily.

Frosted, sprouted and diseased kernels heat more easily than normal ones because some splitting up of the gluten has taken place which also increases moisture diffusion and respiratory heat. Respiration occurs in oxygen free air but just over one-third as much as in normal air.

We have dealt above with causes of heat damage. Let us now consider some of the more practical data and its application.

Damage Within Undried Tissues

INCREASING temperatures have increased respiration in wheat until a temperature up to about 135 degrees at least has been reached in the stored mass. Heated corn has been recorded up to 145 to 147 degrees. In considering the spoilage of grain from respiratory heat we can do no better than to summarize accepted views as was done in a June, 1931, article on wheat by Dr. D. A. Coleman of the Grain Division of the Bureau of Agriculture Economics. Studies show that damage to wheat is due to harvesting and storing with excess moisture either on the outside of the grain and straw or naturally within the undried tissues. The amounts of heat and moisture and the time of exposure determine the extent of spoilage.

If moisture at storage is moderate (15 p. c.) and heat is at 75 to 85 degrees respiration and resulting fermentation proceed slowly. The first symptom other than temperature rise is the wet or dank odor of so-called sick wheat. Later under these same conditions a considerable part of the oxygen around the kernels is used up (a partial anaerobic condition) and a group of soil microorganism develop in the bran coat elaborating a characteristically earthy or musty odor. Variations in the kind of organisms working vary the intensity and type of odors. On the other hand if we assume 16 to 17 p.c. moisture and low temperature, 75-80 degrees, mustiness will immediately develop masking other odors. At higher moisture yeasty or sour odors mask all others.

Velocity of Fermentation

INCREASING temperature by 10 degrees but maintaining the same moisture mentioned will double the velocity of fermentation. At these temperatures and with more moisture wheat discolors and heat damage makes its appearance. If temperature is between 100 and 115 degrees as it often is at harvest, the development of musty, earthy, moldy odors does not take place. Instead sharp acid odors appear and as moisture increases discoloration is rapid and the result is "skin-burned" or "mahogany" kernels. Death of the germ takes place at varying points in the process as conditions vary.

Strong and weedy odors and types of earthy odors develop when moist wheat is stacked with excess moisture, with large amounts of green damp weeds or left to weather for some time in the shock.

The cause of heating is the same in

all grains. The resulting damage to each kind in storage is similar and varies only as the difference in harvesting and handling methods varies the combinations of the factors involved.

Natural variations of weather during growth affect the chemical makeup of grain kernels and therefore to some extent their keeping qualities as already explained. In this respect the farmer can alter the resulting product only in a limited way by providing optimum soil fertility, good cultivation, aid in control of diseases and intelligently timed cutting. But over the more important agents of injury, heat and moisture in the mature grain, both grower and handler may exercise considerable control.

Other than the mechanical and the respiratory types of kernel injuries, the main damage to grain occurs during growth and is the result of disease and objectionable odors. Garlic and smut are the main odors and are not difficult to prevent on the farm.

TROUBLE STORING BARLEY

We are experiencing a lot of trouble in keeping our barley in condition on account of the high moisture of the 1941 crop. It seems impossible to keep the grain from going warm.

Before storing it we clean it and we are running it constantly from bin to bin. We have no drier so cannot reduce the moisture content that way. What we are getting is running 16.5%. What is the most satisfactory manner to handle barley in this condition? Please publish the responses in "GRAIN" so all can be benefited.

PAYS SAFETY FEE HAPPILY

WE ARE certainly pleased to enclose the fee for the 1942 Safety Contest and acknowledge with thanks receipt of the trophy SOGES Vice President Bart Pow kindly delivered to us, writes Frank J. McLean, Superior Elevator Co., Ltd., Port Arthur, winner of The Day Company's All-Time Safety Trophy.

Do your \$ \$ \$ \$ \$ \$ \$ \$ work too? Give them a chance. Invest regularly in WAR SAVINGS BONDS.



OUR TRUCK-DUMP SIGNAL SYSTEM

By Lou Ambler,
The Glidden Company, Chicago

WE HAVE in service at our elevator "B", a 2,000,000 bushel house, a truck dump, the platform of which is raised by means of two compressed air-actuated pistons. It is necessary that the truck weighman have some way of knowing that when he has released the air from the pistons to lower the platform, preparatory to the taking of his tare weight, that the piston rods have completely lowered away from the platform so as not to interfere with the weighing of the truck.

We have connected to our truck dump pistons a signal light system which was designed by our Maintenance Superintendent, J. H. Cassin. This signal system has been approved by the Chicago Board of Trade Weighing Department and consists of a six-volt transformer with a two-pole normally open relay—the six-volt circuit going through pistons and frame of scale so that the pistons must be clear of frame or dumping platform before the weighman will get the green signal light. If the green light does not flash on with a lowered platform from any of the following causes, namely a burned out lamp bulb, electric power failure, or one of the piston rods still in contact with the platform, the weighman then determines the cause before going ahead with his weighing.

If anyone wishes more information concerning this signal system they can secure same by writing to Mr. Cassin in care of our Company, 5165

W. Moffat Street, Chicago, and it will be forthcoming promptly.

[Ed.—Have you a novel time-saving arrangement that will assist your brother reader? Tell us about it and let's all gain, one from the other.]

"SCORCHED EARTH"

"WAR is not the only agency to produce destruction and famine. Nature has done it on many occasions and will do it again. With these uncertainties constantly at its elbow, humanity ought to look with grave caution on any grandiose, presumptuous schemes that reckon on no more wars and no more harvest failures. Science has done a great deal, it is capable of doing a great deal more, but it has not yet succeeded in controlling Nature or the human mind. Indeed, the latter seizes on the discoveries of science to put them to ill and destructive uses.

"It seems, therefore, that humanity should concern itself less with restriction of production than with the full use of the bounty of the earth. There are more than enough mouths to feed. There never was a surplus production in proportion to world population needs.

"The 'scorched earth' policy might be all right for war purposes. In any other circumstances, it is a rejection of Divine bounty, a miserable confession of human selfishness and impotence."

—Milling, Liverpool.

They laughed when I came in with shorts on, but when I sat down they split.—U. S. S. Augusta Cracker.

1941 FIRE LOSSES

The authoritative National Fire Protection Association has just released the 1941 fire and explosion statistics for elevators and flour mills. The shameful records so far include only 13 typical states, but these figures are sufficiently severe to give chilblains.

The number of fires and the losses suffered by the elevatormen and flour millers of the entire country, as estimated by NFPA, amount to 2,000 fires incurring \$4,000,000 loss. In the number of conflagrations, elevator and flour men rank 17th worst out of 33 classifications. In fire loss, the industry ranks 15th worst. Here are a few of the state reports:

Illinois 68, \$257,664; Iowa 36, \$91,625; Kansas 9, \$65,045; Nebraska 11, \$44,816; Oregon 9, \$9,374; South Dakota 7, \$53,827; Wisconsin 46, \$47,374. Total 189, \$572,300.

Explosions, smoking, electrical, and incendiary (suspicious) are some of the many causes listed.

SOYBEAN FLOUR HIGH IN "B"

GROWING importance of the soybean as a food product is attracting widespread attention of nutritional experts, as recent tests prove that the soybean ranks very high in content of vitamin B₁ and the vitamin B complex in general, according to an announcement by the Soy Flour Association.

"Since the combination of vitamin B and soybeans had so much to do with putting the 'blitz' in the German 'blitzkrieg,' there has been much increased interest in army and other government circles in this country in both vitamin B and soybean products. Soy flour ranges from 40 to 50% of protein of an extremely high grade—practically comparable with the protein in meats," says P. E. Sprague, president of the Association. "Minerals, as well as abundance of vitamin B makes soybean bread, in which soy flour is mixed with wheat flour, an extremely rich source of vitamin B as well as a product that adds a great deal of valuable protein to the diet." [Ed.: Let's hope bread consumption can be boosted many fold and NOT to the detriment of wheat grindings].

Because of defense needs for adhesives, the USDA just announced it is exploring the possibility of increasing commercial production of soybean protein by utilizing a process developed by department chemists. The shortages of casein, an adhesive of defense industries and housing, brings this need to the front.

The adhesive qualities of the soybean protein are fully equivalent to casein. 10,000 tons of soybean protein will be required annually—some three or four times the amount now being used. It is found that the organic salts in soybean meal make the protein easily available.

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CONVEYING AND ELEVATING EQUIPMENT
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TORONTO . WELLAND **DODGE** MANUFACTURING DIVISION **CANADIAN MEAD MORRISON** MONTREAL . WINNIPEG

BARLEY FIELD DAY

As Reported by Ed Josephson, Albert
Schwilt & Company, Chicago
Chapter President, SOGES

MALTSTERS, barley men, master brewers, plant breeders and others interested in barley production ran up an attendance pretty close to 150 at the University of Wisconsin—USDA Barley Field Day held July 11th at Madison. We saw the intricate cross breeding done by the fine staff of experts at this experimental station. (Grain inspectors please note: Over 4,000 varieties are being tested by various stations in the U. S. alone.)

These plant breeders select varieties possessing some dominant desirable characteristics and cross them with other varieties having characteristics also desirable. Thus in 12 to 15 years they find a variety having plumpness, mealiness, high extract, and diastatic power—all desirable to the maltster—and yet possessing a disease resistance, good yield, and strong straw. To incorporate all these desirable characteristics in one variety is not an easy task. Before a new variety can be released to farmers these plant breeders must be sure it does not have any outstanding weakness.

Barley breeding and testing experiments were reviewed in detail, including numerous hybrids designed to combine high yield of grain, resistance to the important barley diseases, and good quality. Wisconsin 38 was bred at Madison by crossing the Michigan smooth awned black barley with the rough awned Odenbrucker—an old Wisconsin stand-by. In 13 years Prof. Leith had a variety that replaced all others throughout the entire middle west and parts of Canada, for the smooth awned character alone has immeasurable value in that its straw can now be used for feed. Wisconsin 38 also inherited the high yielding quality of its parent, makes a very fine malt, and in turn a dandy bottle of beer. No doubt a new variety may some day be found, that will be even better than the Wisconsin 38, and it's just these fine experimental stations that will find it.

SO THAT'S WHAT'S IN IT?

The brewing industry as a whole keeps in operation a farm of approximately 3,000,000 acres annually to produce the items used in manufacturing its products, to wit:

58,000,000 bu. barley
57,600,000 bu. malt
16,400,000 bu. corn
189,000,000 lbs. rice
31,926,866 lbs. hops

This accounts for 25% of all the barley grown.

No matter what else you have, you are poor if you lack friends.

New Code Book

A 1943 edition of the National Fire Protection Association's Codes for the Prevention of Dust Explosions is now available. Copies are available from NFPA at 60 Battermarch St., Boston, Mass.

WORTH WHILE TEXT ON FIRE BRIGADES

A very authoritative text on "The Organization and Training of Industrial Fire Brigades" is being made available to all interested by S. C. Toof & Co., Box 55, Memphis, Tenn. Receiving the endorsement of foremost authorities in the fire-fighting field, this 117-page book is being used as a manual in a large scale training program now under way in many cities, as well as being followed by many businesses and industrial establishments throughout the land.

With the unparalleled increase in fires and explosions in grain handling and processing plants any safeguard against the hazards of fire and other destructive elements in the emergency that we are now facing is worth while. Furthermore, fire brigades, long neglected because of indifference by management and absence of interest by employees might well be brought into a state of perfection under present conditions—and to everyone's advantage.

Special quantity discounts are available on this \$1 text through bulking orders, and if its suggestions are placed into effect that dollar ought to be one of the best ever invested.

Every Time

Science Prof: "What happens when a body is immersed in water?"
Co-ed: "The telephone rings."

GLAD TO HEAR ABOUT IT

IAM very happy about the way the Omaha convention went off. From all accounts everyone had a wonderful time and left Omaha feeling they had experienced a beneficial meeting.

We have had a most trying time up here since January last year and if ever anyone was "low" I was over this elevator business. Troubles, real man-sized troubles, hounded me for a good five months, and it is only the last few weeks that I have felt life was worth living again.

(Mr. Poulton, past President of the SOGES, thoughtfully wired his greetings to the Omaha convention when he found himself unable to attend. His cheer and stimulation were, as always, contagious.)

Think Gil Lane will make one of our best Presidents as he is a worker. Glad the 1943 convention will be held in Chicago, as I have never felt I had learned or seen enough of Chicago, and all being well next year I'll get my fill.

My boy Bill is in the Navy and is stationed for training at Esquimalt, B. C., which is only a stone's throw from Victoria where Mrs. Poulton's sister lives. So Bill is quite close to interested friends and is enjoying himself.—Percy C. Poulton, N. M. Paterson & Co., Ltd., Fort William.



There is a great moving power in keeping on learning about what you are doing.—Thos. Tapper.

Fire and Dust Proof Removable Section

ELEVATORS

ELEVATOR CASINGS

SPIRAL CONVEYORS AND BOXES

SPOUTING AND BLOW-PIPING

THE "MILWAUKEE" CYCLONE DUST COLLECTOR

COMPLETE ELEVATING, CONVEYING AND DUST COLLECTING SYSTEMS

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MILWAUKEE

WISCONSIN

CARLOADINGS PASS 2 MILLION MARK

Carloadings of grain and grain products continue their lead over previous years. And, for the first time in many years the two million mark was exceeded in November—with a few weeks left to push this figure higher.

While the carloadings formerly were indicative of a certain average number of bushels per car, this figure, too, has been boosted through increasing the load per car. On a bushelage basis, therefore, 1942 probably is witnessing the greatest movement of grain and grain products since the last war.

Weekly carloadings of all freight surpassed the 1930 figures for the first time this year on Nov. 14, falling behind them Dec. 5. 1941 figure surpassed 1930 weekly carloadings on Nov. 7 and remained ahead of those pre-depression heights to the end of the year.

Grain and grain products were loaded as follows, for the weeks ending:

	1942	1941	1940
December 5.....	44,277	42,754	35,465
November 28.....	39,078	40,902	33,689
November 21.....	45,690	41,022	33,323
November 14.....	41,340	40,297	29,999

Cumulative loadings of grain and grain products for the first 49 weeks of the past three years, through the week ending Dec. 5, were: 2,048,485—1942; 1,910,259—1941, and 2,751,621—1940.

CORN CROP A RECORD; WHEAT SECOND LARGEST

Final estimates of this year's corn crop places it at 3,175,154,000 bus., the largest ever grown. Production was 2,677,157,000 last year, and the 10 year average is 2,307,452,000 bus.

This year's wheat crop climbs into second place in the annals of the USDA with a final estimate of 981,327,000 bus., compared with 943,127,000 a year ago and the 10 year average of 745,575,000 bus.

Oats are placed at 1,358,730,000 bus., compared with 1,180,663,000 last year and the 10 year average of 1,016,061,000. Barley is given as 426,150,000 bus., compared with 362,082,000 last year and the 10 year average of 226,460,000. Rye figures are 57,341,000; 45,364,000, and 37,870,000. Flax, 40,660,000; 32,285,000, and 11,252,000. Soybeans (for beans) 209,559,000; 105,587,000, and 36,385,000 bus.

REFINERS TAKE 40%

Approximately 40% of the corn reaching primary markets has been consumed during the past ten years by the corn refining (or wet milling) industry. This 40% equals a fifth of all the corn sold off farms, states the Bureau of Commerce, and amounts to somewhat more than 3% of the total annual output.

BIGGER CORN ACREAGE ASKED

An increase of 5% over the 1942 corn acreage allotment has been set by the USDA, for a total of 43,423,000 acres. This naturally will result in greatly increased tonnage to be handled, particularly if the yield next year increases as much as it did in 1942 over 1941.

CORN GRIND STEADY

With a shorter month and two holidays, 11 refiners of starches, syrups, sugars and other derivatives of corn ground 10,469,011 bus. thereof for domestic purposes during November. This compares with 10,528,413 last month and 8,652,724 a year ago.

WHEAT GRIND JUMPS

Wheat ground during October by 1,076 mills totaled 47,703,035 bushels as compared with 44,562,783 the month previous, and 44,251,019 the year previous. These reporting mills produced 96.9% of the flour ground, the Department of Commerce reports.

WHEAT FOR ALCOHOL

Some 50,000,000 bus. of government-owned wheat is to be sold by the CCC to be ground into granular flour for making industrial alcohol. The granular flour yields more alcohol than either the corn or corn-wheat mixtures which distillers have been using.

WHEAT EXPORT PROGRAM

Mexico, Central America, Cuba, Columbia, Ecuador, and Venezuela are slated to receive wheat through AMA payments, the USDA announces in encouraging exportation. Total supplies for the year beginning July 1, 1942 are estimated in the official crop report at 1.6 billion bus., including production of 984 million bushels and a record carry-over on July 1 of slightly over 630 million. The total supply in 1941-42 was over 1.3 billion. [Elevator capacity totals 1.6 billion.]

Busy at Toledo

We're all frightfully busy here, what with no help and all. These are trying times, but we're all equal to the occasion.—Carl J. Pauken, The Rice Grain Co., Toledo.

OMAHA CONFAB BEST YET

So far as I am concerned, the recent Omaha convention was the best of any that I have attended, and am looking forward to the Chicago meeting. There is one thing I hope for and that is elimination of evening meetings as at Omaha.—Jim Kier, Standard Milling Company, Kansas City, SOGES director.

TAKEN A GOOD SQUARE LOOK AT YOUR ELEVATOR LATELY?

See signs of deterioration? . . . Yes?

Think, immediate repairs advisable? Further delay means further *deterioration*.

More and more, grain plant owners are seeking our advice and service. *Why?* Because, dotted all over this continent, they have *seen* the *grand jobs* we *have* done in plant restoration—applying the most scientific principles of weather-proofing and rehabilitating all types of concrete and brick masonry.

Why not *consult* us? Costs you nothing for a survey and estimate.

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INCREASE IN STRIKES SINCE PEARL HARBOR

FROM available figures it is possible to observe the strike trend since Jan. 1, 1942. The record is so appalling as to cause consternation, if not worse.

The number of officially recorded strikes in war industries increased from 27 in January to 222 in July. The men involved in these strikes increased from 11,605 in January to 80,722 in July, and the number of man-hours lost in war production industries increased from 369,576 in January to 1,868,912 in July.

During the first seven months for which records are completed, 9,045,256 man-hours were lost in war industries through strikes—a figure that does not include time lost by workers who, because of strikes in other plants, could not get materials for work in their own plants. (There is no way of estimating these indirect losses accurately, but it is known that the number has been considerable.)

There has not been any official report of all strikes in both war and non-war industries since May, 1942. According to the Bureau of Labor Statistics, the new strikes (exclusive of strikes that carry over from month to month), had increased from 155 in January to 275 in May. The number of men involved in new strikes increased from 32,500 in January to 58,000 in May. Throughout this five-month period, the estimated number of man-hours on current and carry-over strikes never fell below two and a half million in any one month.

The War Labor Board and other governmental agencies and officials, in what must be regarded as an obvious effort to minimize the seriousness of strikes in the post-Pearl Harbor period, have emphasized repeatedly that the striking man-power represents only a minute percentage of the total manpower in industry. Union labor leaders have been quick to take their cue from this line. This insistence, however, is misleading. To obtain an accurate picture of the situation, both the percentage of labor involved in strikes and the factories in which they occurred must be studied.

A strike involving only a small number of men in one plant may be responsible, through stoppages in the manufacture of some vital parts for use in other plants, for a much more serious lag in our war effort. This has happened in many cases.

In Canada, where 43% of the population is employed as compared with 40% in the U. S., and in Great Britain where 46% are employed, the man-hours lost are 14.3% and 12.5%, respectively, compared with U. S. strikes—and these are largely of a non-union nature.

For a nation dedicated to fight to victory, a 700% increase in the number of strikers in war industries from January to July is not good; the increase in the number of strikes, and the paralyzing rise in the loss of man-hours, if not firmly and fairly checked by the determined co-operation of all parties concerned, can prove fatal.

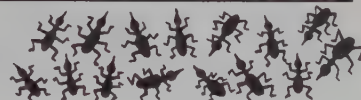
For machines to stand idle because men persist in "wildcat" strikes, unsanctioned even by their own union leaders, is not the way to win the war. For foundries to cool—while men face death halfway across the world—because one union has a quarrel with another, is not the blueprint for victory.

It cannot be too strongly urged that Congress take speedy steps toward establishment of a national labor relations policy that is both exact and fair. It must lay down the rules for a War Labor Board to follow, rather than to leave that Board free to pursue a self-made and changing set of rules. That shouldn't be too "tough."

Strikes ARE stopping war production in a big way. Public opinion is slow to mould, but when the die is cast a smashing reaction against strikes directly, and unions indirectly, is sure to come.



=More



We quote from October GRAIN:

"... a good estimate would be that at least 80% of all grains received in terminal elevators over the entire U. S. this year (1942) have contained primary infestations of various insects."

DON'T WAIT FOR TROUBLE TO DEVELOP

Waiting until the bugs start walking off with your grain may prove costly. The best, perhaps the **ONLY SAFE** way is to treat even slightly infested grain upon arrival and when turning. The economical way to do this is with

Larvacide

CHLORPICRIN

THE COST—in closed, concrete bins, using dosage recommended by the U. S. Dept. of Agriculture, is

ONLY \$1.50 TO \$1.70
per thousand bushels

Compare this with the cost of any other treatment with long-standing record of satisfaction.

EXCELLENT RODENT CONTROL

is had with light dosage, a pint to a pint and a half to each 1,000 sq. ft. of floor area. Drives pests out of retreats to die on the open floor without carcass nuisance, and where the broom and shovel can go to work. Users report that using LARVACIDE in bins materially reduces, if not practically eliminates rodents from premises.



Convenient packaging: Cylinders 25-180 lbs., and for small jobs, rodent work, etc., handy 1 lb. Dispenser Bottles, each in sealed can, 6 or 12 to wooden case. LARVACIDE is stocked in major cities.

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BOSTON • PHILADELPHIA • OMAHA

CHICAGO DANCES, SINGS, PLANS FOR YOUR CONVENTION

ANOTHER successful annual Ladies' Night, instituted seven years ago by SOGES President Gil Lane, was programmed by the Chicago Chapter on Saturday, Dec. 12th. The turnout nearly topped the 150 mark. Prexy Lane presided, aided and abetted by Chapter President Ed Josephson and Albert Schwill & Co., maltsters.

Combined because of war conditions this year was Associates' Night, and the two outstanding feature affairs on the Chicago Chapters agenda really resulted in something that will still be talked about when the annual continent-wide convention is held here on March 25-26-27th. "We've got to get in practice for the big event anyhow," said Associates' Committee Chairman H. G. Onstad and his able committee of one—Russell B. Maas, Vice President of Screw Conveyor Corp.,—and all attending will vouch for the job they did as being the best ever.

One hardly had time to shed the winter garb before shaking hands all round—and besides being a pleasure, that really meant a lot of hand-shaking and conversation-swapping. Appetizers and light refreshments generated further mingling and before long everyone was going to everybody else's house the following week for bridge, et al.

Sing "God Save the King"

THOUGHTFULLY providing an accordionist, spontaneous singing, with some rather good "barber-shopping," broke loose here and there. But the real burst of song was when, standing at their respective tables, the crowd burst into "God Save the King" such as would make the Fort William-Port Arthur Chapter, as well as the many other SOGES friends and members up northward, proud. "My Country 'Tis of Thee" and "The Star Spangled Banner" followed. "We'll know the words by heart before convention time," confides Ed Josephson.

The sumptuous banquet concluded, Toastmaster Lane brought on his "GILANE" Frolics, and they were splendid. The corps came from the Fenger High School and they kept the crowd's attention for a long, long time. A few appropriate remarks followed from the dignitaries and burden-carriers present, and then the band came on.

From then on the frivolity and sociability soared. Emcee Lane distributed brooms with beautiful red bows tied on to every male wall flower with the admonition that they had to dance with the broom until such time as they found a gorgeous beauty they'd prefer; then they "cut-in", gave the broom to the deprived partner, and on and on it went. Grand marches, grand rights and lefts, and all the other fun-provoking floor

stunts were calendared, and before long the revelers were breathless. Senator Beakey of *Grain & Feed Journals*, who has never let the girls know what a good dancer he was due to his shyness, fainted from the excessive exercise,—and vows that no fair damsel is ever again going to get him out on the floor.

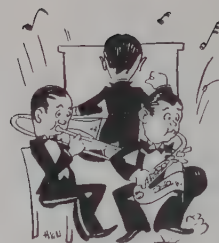
After that the party waxed enthusiastic over the pending national convention coming up on March 25-26-27th. Plans are afoot, committees are starting to work, and the wimmin folks are being unfairly accused of planning a wholesale taking over of some pretty good sized department stores—darn 'em.

Urges Making Reservations Now

FEEDMAN LANE says: "Now that we've got everyone geared up to get behind plans for the best convention on record, the rest will be easy. Our convention dates fall on Thursday, Friday, and Saturday. This gives everyone an opportunity to get things started for the week before leaving home, that is all except our members in Halifax and St. Johns, N. B., and they've got to start a couple of days before anyone else does. Then on the return trip, most everyone will take the streamliners back Sunday or the sleepers back Sunday night, so the travel end is all taken care of—provided everyone will make their train reservations right now."

"Chicago hasn't had a convention since 1935," bemoans Maltster Josephson, "but quite a number have partaken of the splendid programs and hospitality extended by other Chapters and grain centers. While our membership of over sixty is diversified more than in any other center, yet that multiplicity of interest should enable us to put on a broader program. War times are trying. Our responsibility on every count is more deep seated than ever before. We owe it to our countries, our firms, and ourselves to partake and participate up to the limit of our abilities. We are counting on those outside Chicago to take part in the program and pertinent discussions, just as much as we are counting on our own brood speaking their piece. . . . We're expecting you March 25-26-27th."

"Sure everybody's busy. Busier than they've ever been before in their lives. Most of us would have said we couldn't handle as much work today as we are, but," philosophizes Russ Maas, "when you want something done well and done quickly, always take it to a busy man. The Associate Members of SOGES have their litter of headaches, many of which are so entwined with those of the operative member that no line of demarcation could be drawn. But we're sure of making a success of this convention, and know we've got a long ways to go



to equal or surpass others held in recent years. Chicago's 'I Will' spirit is going to dominate our plans to the end that no one can afford to not learn what's going on."

But we pause at this point, for from here on the ladies caught the drift of the conversation and took over on what they are going to plan for the other half of our "food front."

Carlson Addresses Safety Meeting

Frank E. "Slim" Carlson, Occident Terminal Division of Russell-Miller Milling Co., Duluth, addressed the Twin City Occupational Safety Conference on Nov. 9th on "Maintaining Interest in Safety." This series of safety talks is sponsored by the Grain interests headed by Mr. A. B. Dean of Commander-Larabee Milling Co. Paul H. Christensen, Van Dusen-Harrington Co., heads the elevator and mill section. Five more programs are to be presented in the Hotel Nicolet.

"SAFETY work must not be considered as an extra activity in your plant, but as an essential part of every job.

"Management must provide the stimulus, superintendents or safety engineers the active leadership, and the workers must all be given an opportunity to participate in the safety educational program. Management is primarily responsible for eliminating working hazards, but adherence to safe practices is in the hands of the employees."

Mr. Carlson urged that safety committees be set up and that all workers be given an opportunity to serve on them. He also spoke of the value of safety classes, the use of safety rule books designed to fit specific occupations and the promotion of safety programs through posters and bulletin boards. "Safety is no longer a matter of protecting the interests of both management and labor in a given plant. With the growing shortage of manpower, safety work is the obligation of every man in industry to the entire nation."

NARY A RIPPLE

Cryeng—They say young James was born with a silver spoon in his mouth.

Holowynge—Well, he doesn't seem to have made much of a stir with it.

Complete your WAR SAVINGS STAMP album today and take another shot at the Axis.

What the Society Means to Us

BY CHARLES F. WALKER, A-D-M CO.,
PRESIDENT, OMAHA-COUNCIL BLUFFS CHAPTER

THE Society has meant a great deal to me, but not being capable of expressing my thoughts and putting them on paper properly the more I thought about doing so the more feeble my mind became—in fact—I felt somewhat like the little boy, an inmate of the home for the feeble minded, who was standing in front of the institution one day when a farmer drove by. The little fellow said: "Hello! Where are you going?"

"Well," said the farmer, "I'm going home and put this manure on our strawberries."

"Oh, heck," said the boy, "we put sugar and cream on ours."

You all know that when a child is born it comes into this world without anyone that it knows. The child gradually progresses under its mother's care until such time as it enters the business world and becomes a person of wide acquaintance. The meeting of other people in their own walk of life whose problems and troubles are mutual and the discussion of those problems cannot but help solve same to their mutual satisfaction. This makes those people fit into the cog-wheels of the world and makes those wheels turn a whole lot better.

I feel that I have gotten a great deal out of the association with the boys of the Omaha Chapter,—also the boys of the other chapters at our annual conventions. In other words, these were things I never knew until now.

It has been a real pleasure for me to attend our monthly meetings and I presume it is the same with you fellows. But when you go to a meeting—don't, please—don't be just a chair-warmer. You may make a mistake by speaking, but profit by that mistake next time, for there is only one man who does not make a mistake and that is the one who does not do anything!

I can't emphasize too strongly that our Society seeks the aid and help from our bosses and managers, seeks your questions and comments at all times. Our Society is for the use of management—men like yourself. We gain from every contact. It is by close association our bosses will understand our problems and we will understand theirs.

I would like to take this opportunity to invite bosses to attend our meetings,—any or all of them. I will assure them it will not cost them a dinner every time, for harmony between the bosses and the supers is something that is to be cherished vitally. This can be done only by close

associations, so you bosses—get close to your supers—and you supers get close to your bosses—they're both human after you get to know them,—and that goes vice-versa, too.

It has always been my one ambition to leave this world—not with scads of money or other tangible values obtained by the sweat and blood of other men, but to leave it with things more easily done and with happiness and contentment for my having paid this short visit to this earth. This can be done by honest association with your fellow man.

As I said before, my association with the Omaha Chapter has been a very pleasant one. The reasons are several; one is—there is Jerry Lacy, Westcentral Grain Company, Vice President of the Chapter and General Chairman of the Program Committee. Now Jerry is what you call a real executive; he doesn't believe in working himself so he appointed Harry Clark as his Secretary—and Harry is responsible for this wonderful convention. At this point I would also like to thank the directors of the Grain Exchange for their assistance and co-operation in helping to make this convention a success.

CORN PRODUCTS TAKES TOP HONORS

With 198 participants, and eighty-four companies starting in the first National Safety Council Food Section's safety contest, Corn Products Refining Company, Argo, came through with the largest number of injury-free man-hours during July, according to a report just compiled. The average frequency rate for this month was 16.41.

General Mills' plants at Buffalo, Minneapolis, Chicago, Vallejo (Calif.), and Wichita placed with clear records in Division I, Group A. Ralston-Purina Company's St. Louis branch, and the McMillen Feed Mills, Decatur, Ind., also are neck and neck.

Smith Succeeds Lyle

Walter Smith, who worked under John Lyle at the Ralston-Purina Co. plant in Buffalo for some time, succeeds the latter.

Leonard Berg to Army

Leonard Berg, 44, formerly Superintendent of Van Dusen-Harrington's Star Elevator, was inducted into the Army late last month. Emil Carlson, foreman for many years, succeeds him.

Harry Shere to R. R. C.

Harry Shere, Vice-President of Van Dusen-Harrington Co., Minneapolis, took an important position with the Rubber Reserve Company—an RFC subsidiary.

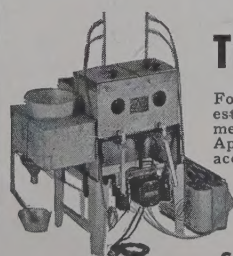
Peter Wegren Dies

Peter Wegren, 84, Superintendent of Van Dusen-Harrington's Pioneer Steel Elevator until his supposed retirement in 1935, died at his home in Minneapolis after 29 years at his post. He had been with the company for 43 years. Actually he never retired, but worked to within two days of his passing away. In all he worked 60 years in Minneapolis elevators.

KNOWS FROM EXPERIENCE

Landlady: What do you think the poet meant when he wrote: "The substance of things hoped for, the evidence of things unseen?"

Boarder: Hash, probably.



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STEINLITE
MOISTURE TESTER

SUPERS MEETING DATES

The Minneapolis Chapter of SOGES will hold a regular monthly business session on Dec. 29th. Their January 30th meeting will be Annual Ladies' Night, reports Clarence C. Batch, Twin City Trading Co., Chapter President.

The Omaha and Chicago Chapters meet on the first Tuesday of the month, namely, Jan. 5th. Kansas City meets on the third Tuesday, or Jan. 19th.

WARD COMBS WELL AGAIN

Ward A. Combs, owner and manager-in-absentia of the Presto-X-Company, Omaha, and one of the hospitable hosts at the SOGES Omaha convention last Spring, writes that he has fully recovered from his emergency operation at Great Lakes Naval Training Station and is now stationed at Camp Moffett.

A few days after he entered "boot training" he was made Assistant Company Commander, or Assistant Chief Petty Officer, and, he says, "it's a lot of work!" His address is U.S.N.T.S., Company No. 1709, Great Lakes, Ill. He would welcome word from his many friends in the industry.

New and Interesting

I find something new and interesting in every issue of GRAIN that comes, and I congratulate you on the fine progress you have made under conditions that could hardly be said to be favorable for launching a new technical magazine when you started this.—M. Dwight Bell, Consulting Engineer, Minneapolis—now in the Army.

GRAND MEETINGS

Our Chapter has really been having some "ding-dong" meetings this year and I hope we can keep things moving along at the present pace. Attendance has been good and our speakers have really had something constructive and pertinent to offer.—Robert Brett, Fruen Milling Co., Minneapolis.

Glad to Be Back

Well here I am once more, back in the ranks with the rest of the men of the Grain Elevator School. Enclosed are my dues for re-entering the Society. This time I will remain.—William Recker, H. W. Rickel Co., Detroit, Mich.

No Raise in Rates

New employes cannot be hired at increased rates over those paid predecessors for the same type of work.

HE LIKES IT FINE

Have just finished reading the new Safety Manual and I must say that it is a dandy little book. Unquestionably it should prove invaluable to all Supers as well as all others who may receive a copy,—and it should prove a boon to SOGES membership.—Lou Ambler, The Glidden Co., Chicago.

Lucky Law

The teacher was giving a class lecture on "gravity". "Now, children", she said, "it is the law of gravity that keeps us on this earth".

"Teacher", inquired one small child, "how did we stick on before the law was passed?"

EMPLOYMENT BUREAU

HELP WANTED

ASS'T SUPER WANTED: Man who can take charge of our elevator, doing unloading of bulk feeds and grain, grinding and blending. Must know feed milling equipment, corn cracking rolls, etc., and how to handle them, be hard worker, and draft exempt. Must have right control over men under him. Have in mind about \$225. Living conditions ideal, inexpensive. Address C25H, Adams Employment Agency, Board of Trade, Chicago.

EXPERIENCED FLOUR MILL men of good repute wanted as sweepers, oilers, roll tenders, spouters and smutters. Must be type willing to learn and anxious to advance. Trial starting rate 67c. If man has aptitude we advance rapidly and pay accordingly. No liquor. Address B41H, Adams Employment Agency, Board of Trade, Chicago.

COUNTRY ELEVATOR MANAGER WANTED: Must be experienced in buying, handling and selling grain, mixing feed and merchandising in one-ton mixer plant, and have knowledge of general office bookkeeping and procedure necessary. Address B30H, Adams Employment Agency, Board of Trade, Chicago.

SUB-FOREMEN WANTED: Want several men who have possibly had some experience in larger grain plants, but would not be in the foremen or superintendent class. Opportunity of learning business and working way up. Address B31H, Adams Employment Agency, Board of Trade, Chicago.

MILLWRIGHT WANTED: Man who is experienced in repairing and keeping in good condition feed milling and elevator equipment. Address B29H, Adams Employment Agency, Board of Trade, Chicago.

COMPETENT GENERAL SUPT. WANTED for grain operation in mill. Must have good recommendations. Address B32H, Adams Employment Agency, Board of Trade, Chicago.

MILL SUPT. wanted for interior Texas plant. Address B33H, Adams Employment Agency, Board of Trade, Chicago.

180,000 Sq. Feet of Surface renewed with GUNITE and SURFACITE!

THE KELLOGG CO.,
BATTLE CREEK, MICH.



All the cracks in this fine-looking elevator were repaired by forcing tough-bonding Gunite into them at a high pressure.

Then the whole structure was thoroughly waterproofed with an extra thick coating of Surfacite.

For a better than new job, write

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*B*ECAUSE we cannot greet all our customers and friends face to face we are happy that the Holidays offer the opportunity to say "Thank You" and to wish you a Merry Christmas and a Happy New Year.

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Minneapolis, Minnesota

In Canada: The Day Company of Canada, Ltd.



... Get the Spirit of Vision!

THE man who first proved a kite would fly never dreamed that his idea would expand to the sky filled with aircraft.

Fulton never envisioned the mighty boats that sailed the seven seas—smoothly, silently, super-powered.

But they—like Edison and Bell and Morse—contributed mightily by blazing new trails.

You just can't stand still these days. You must always advance.

So it is in this industry—in every industry. The founders of the Screw Conveyor Corporation realized these facts from the very beginning. They have constantly raised the level of their sights. The standards of designing and manufacturing equipment, for elevating and conveying interested them of course,—BUT only as something to improve upon.

Nor did they think of the rewards that would result by making equipment better than before

and by rendering skilled service. They simply had the urge to perform a duty as they saw it.

That the rewards have come through an increasing volume of business and recognition of leadership from users is a compliment to products bearing the "Hammond" Trade Mark.

This proved that when they trained the level of their sights to higher things and took on the new spirit of this age, they were on the right track.

That is why they can offer the users of "Hammond Products"—superior design and construction—products that increase handling efficiency and—guaranteed economical operation.

You can make your elevating and conveying problems their responsibility. Their expert engineers are ready to work with you on any material handling or processing problems—without obligation.



SCREW CONVEYOR CORPORATION ACHIEVEMENTS

- 1 The development of "Hammond Screw-Veyor" for horizontal or inclined movement of any free-flowing bulk materials. A principle that is revolutionizing screw conveying methods.
- 2 The development of the "Hammond Screw-Lift" for vertical conveying of materials—exclusive designs—different action—outstanding achievement.
- 3 The ultimate in Screw Conveyors—"Hammond Helicoid."
- 4 Refinements of Sectional Flight Screw Conveyors increasing life and improving performance.
- 5 The "Ace" Anti-Friction Countershaft Box End—totally enclosed construction and—most modern Screw Conveyor Drive.
- 6 "Tem-u-lac"—The Screw Conveyor Coupling Bolts that cannot work loose—extending life of Conveyor.
- 7 Hangers and Box Ends modernized.
- 8 End Thrusts for every condition—new types—improved designs.
- 9 Sheet Metal Products embodying modern design by specially trained craftsmen.
- 10 "Hammond" Elevator Buckets—a full line with exclusive advanced features.
- 11 Improved Standards in the manufacture of Nor-way and Reliance Elevator Bucket Bolts.

Complete systems designed, manufactured and installed.

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